



**IMPORTANT FOR FUTURE REFERENCE**

Please complete this information and retain this manual for the life of the equipment:

Model #: \_\_\_\_\_

Serial #: \_\_\_\_\_

Date Purchased: \_\_\_\_\_

**ENGLISH**

**Installation & Operation Manual**  
**REDUCED OIL VOLUME**  
**FRYING SYSTEM**  
Covering  
Models  
**SELV14, SELV14T**



**TO THE PURCHASER, OWNER AND STORE MANAGER**  
**Please review these warning prior to posting them in a prominent location for reference**

**WARNING**

DO NOT store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

**WARNING**

Improper installation, alteration, service or maintenance can cause property damage, injury or death. Read the installation, operating and maintenance instructions thoroughly before installing or servicing this appliance.

**WARNING**

Installation, maintenance and repairs should be performed by a Pitco Authorized Service and Parts (ASAP) company technician or other qualified personnel. Installation, maintenance or repairs by an unauthorized and unqualified personnel will void the warranty.

**WARNING**

Installation and all connections must be made according to national and local regulations and codes in force.

**WARNING**

A country approved all pole circuit breaker with a minimum open contact gap of 3mm must be used for proper installation. (CE countries)

**WARNING**

During the warranty period if a customer elects to use a non-original part or modifies an original part purchased from Pitco and/or its Authorized Service and Parts (ASAP) companies, this warranty will be void. In addition, Pitco and its affiliates will not be liable for any claims, damages or expenses incurred by the customer which arises directly or indirectly, in whole or in part, due to the installation of any modified part and/or received from an unauthorized service center.

**WARNING**

This appliance, when installed, must be electrically grounded in accordance with local codes, or in the absence of local codes, with the National Electrical Code, ANSI/NFPA 70, or the Canadian Electrical Code, CSA C22.2, as applicable.

**WARNING**

Adequate means must be provided to LIMIT the movement of this appliance without depending on the electrical cord connection. Single appliances equipped with legs must be stabilized by installing anchor straps. All appliances equipped with casters must be stabilized by installing restraining chains.

**WARNING**

DO NOT alter or remove structural material on the appliance to accommodate placement under a ventilation hood.

**WARNING**

This appliance is intended for commercial/professional use only and should be operated by fully trained and qualified personnel. It is not intended for continuous mass production of food.

**WARNING**

This appliance is intended for indoor use only.

**WARNING**

If the power supply cord is damaged, it must be replaced by a Pitco Authorized Service and Parts (ASAP) company technician, or a similarly qualified person in order to avoid a hazard. In Europe, supply cords must be oil resistant, sheathed flexible cable not lighter than ordinary polychloroprene or other equivalent synthetic elastomer-sheathed cord (Code designation 60245 IEC 57).

**WARNING**

The power supply must be disconnected before servicing, maintaining or cleaning this appliance.

**WARNING**

The appliance is NOT water jet stream approved. DO NOT clean the appliance with a water jet or steam cleaner.

**WARNING**

DO NOT attempt to move this appliance or transfer hot liquids from one container to another when the unit is at operating temperature or filled with hot liquids. Serious personal injury could result if skin comes in contact with the hot surfaces or liquids.

**WARNING**

DO NOT sit or stand on this appliance. The appliance's front panel, tank, splash back, tank cover, work shelf, drain board is not a step. Serious injury could result from slipping, falling or contact with hot liquids.

**WARNING**

NEVER use the appliance as a step for cleaning or accessing the ventilation hood. Serious injury could result from slips, trips or from contacting hot liquids.

**WARNING**

Potential fire danger exists if the cooking oil level is below the minimum indicated level. The cooking oil level should NOT be allowed to fall below the minimum indicated level line at any time. The use of old cooking oil can be dangerous as it will have a reduced flash point and be more prone to foaming over.

**WARNING**

The contents of the crumb catch and/or filter pan of any filter system must be emptied into a fireproof container at the end of each day. Some food particles can spontaneously combust if left soaking in certain types of oil or shortening.

**WARNING**

Completely shut the appliance down when shortening/oil is being drained from the appliance. This will prevent the appliance from heating up during the draining and filling process. Serious injury can occur.

**WARNING**

DO NOT operate appliance unless all panels and access covers are attached correctly.

**WARNING**

It is recommended that this appliance be inspected by a qualified service technician for proper performance and operation on a yearly basis.

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## **1 THEORY OF OPERATION**

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The Pitco Low (or reduced) Oil Volume fryer works very similarly to the Pitco standard electric fryer. Other than rotating elements (for cleaning), the units function nearly the same.

The Low Oil Volume Fryer has a reduced cold zone to significantly reduce oil usage and extend oil life. This smaller zone may require more frequent filtering depending on the product being fried.

Upon turning the fryer on, the high limit closes the (side on) safety contactor which stays closed until the fryer is turned off. If the oil temperature exceeds 450 deg F, the high limit opens and prevents further operation until the cooking oil has reached a safe cooking temperature. This places a minimum duty cycle on the safety (side on) contactor to insure its proper operation when needed. The “heat demand” contactor opens and closes on demand from the primary control to maintain the desired cooking temperature. When the “heat demand” contactor closes, it energizes the heating elements in the fry pot. Near the fryer heating elements, the temperature probe and high limit can be found. The temperature probe provides a signal to the primary control, sensing the oil temperature in the fry pot.

The fryer is equipped with a manual “ADD OIL” button that can transfer fresh oil from a JIB (Jug in Box) located under the fryer or a bulk oil management system. The operator can use the manual “ADD OIL” button as needed to replenish any oil consumed in the cooking process. It is recommended that oil only be added when the fry pot is at the desired temperature, and that the “ADD OIL” button not be used to fill an empty fry pot from the JIB.

Optional Automatic Top Off: If equipped, the fryer (only when operating at desired temperature) senses the oil level and replenishes consumed oil only between cook cycles. There are no programming options for the operator or service technician, the control functions like any other Pitco electric fryer computer control. The “ADD OIL” switch (described above) is present with Auto Top Off.

## 2 INSTALLATION

### 2.1 CHECKING AND UNPACKING YOUR NEW APPLIANCE

Your new Pitco appliance has been carefully packed into one crate. Every effort has been made to ensure that it is delivered to you in perfect condition. Pitco does not assume responsibility for damage or loss incurred in transit.

1. Upon Delivery, inspect for visible shipping damage in the presence of the trucking operator. If something appears damaged, file a claim for damages regardless of extent.
2. Unpack and inspect unit for damage. Contact the shipper within 15 days and file a concealed damage claim; the shipper is only responsible for concealed damage for 15 days after delivery.
3. Remove the unit from the shipping pallet:
  - a: Remove the filter pan, and JIB pan (figure 2, item 2) from unit before attempting to dismount the unit from the shipping base.
4. Do not allow the full weight of the unit to rest on the legs or caster when removing the appliance from the shipping pallet. The casters can be bent or damaged if too much weight or force is applied to them from improper handling.
5. Check the packing list enclosed with your appliance to ensure that you have received all the parts to the appliance. Refer to figures 1 and 2 for accessory identification. If you are missing any parts, contact the dealer from whom the appliance was purchased.
6. Using the front cover of this manual, record the following for warranty service or future reference: 1. Your Pitco model number. 2. Fryer serial numbers (Found on the inner door of each fryer). 3. The date purchased from your dealer invoice.

Once you have completed the above, the appliance is ready to be installed.

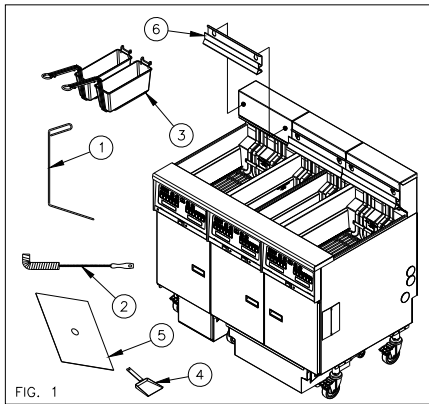


FIG. 1

FIG 1	Fryer Accessories		
Item #	Description		Qty
1	A3301001	Fry pot drain clean out rod	1
2	PP10056	Fry pot cleaning brush	1
3	P6072145	14" twin size fry baskets	2
4	B6681201	Filter shovel scoop	1
5	A6667104	Filter media starter pack 20.5" x 9.92"	1
6	A1108002	Removable basket hanger per frypot	1

FIG 2	JIB Based Oil Top Off Accessories	
Item #	Description	
1	Jug adapter	
2	Jug holder	
3	Oil jug (supplied by others)	

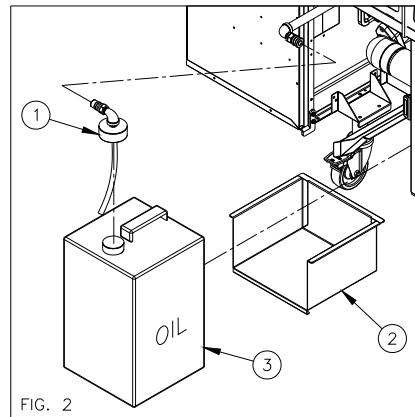


FIG. 2

## 2.2 GENERAL INSTALLATION REQUIREMENTS

Although it may be possible for you to install and set up your new appliance, it is **STRONGLY** recommended that you have this done by a qualified professional. A qualified professional will ensure that the installation is safe and meets local or national building, electrical, and fire codes.

Where conflict exists between instructions in this manual, and local, or national codes or regulations, installation and operation shall comply with the codes or regulations in the locale in which the appliance is installed.

## 2.3 INSTALLATION CLEARANCES

The clearances shown below are for combustible and non-combustible installations and will allow for safe and proper operation of your appliance

	<b>Combustible Construction</b> Inches (centimeters)	<b>Non Combustible Construction</b> Inches (centimeters)
<b>Back</b>	6.0" (15.24cm)	0.0" (0.0cm)
<b>Sides</b>	6.0" (15.24cm)	0.0" (0.0cm)
<b>Floor</b>	6.0" (15.24cm)	6.0" (15.24cm)
<b>Aisle</b>	35.0" (88.90cm)	35.0" (88.90cm)

**WARNING**

DO NOT obstruct the flow of ventilation air openings around the appliance. Adequate clearance around the appliance is necessary for servicing and proper component ventilation. Ensure that you meet the minimum clearance requirements specified in this manual.

**WARNING**

DO NOT install this appliance next to a water cooker, or use in any way in which water can come in contact with the hot oil. Splash over of water into hot oil may result in a steam eruption, potentially causing hot oil to be ejected from the fryer, and creating a burn hazard.

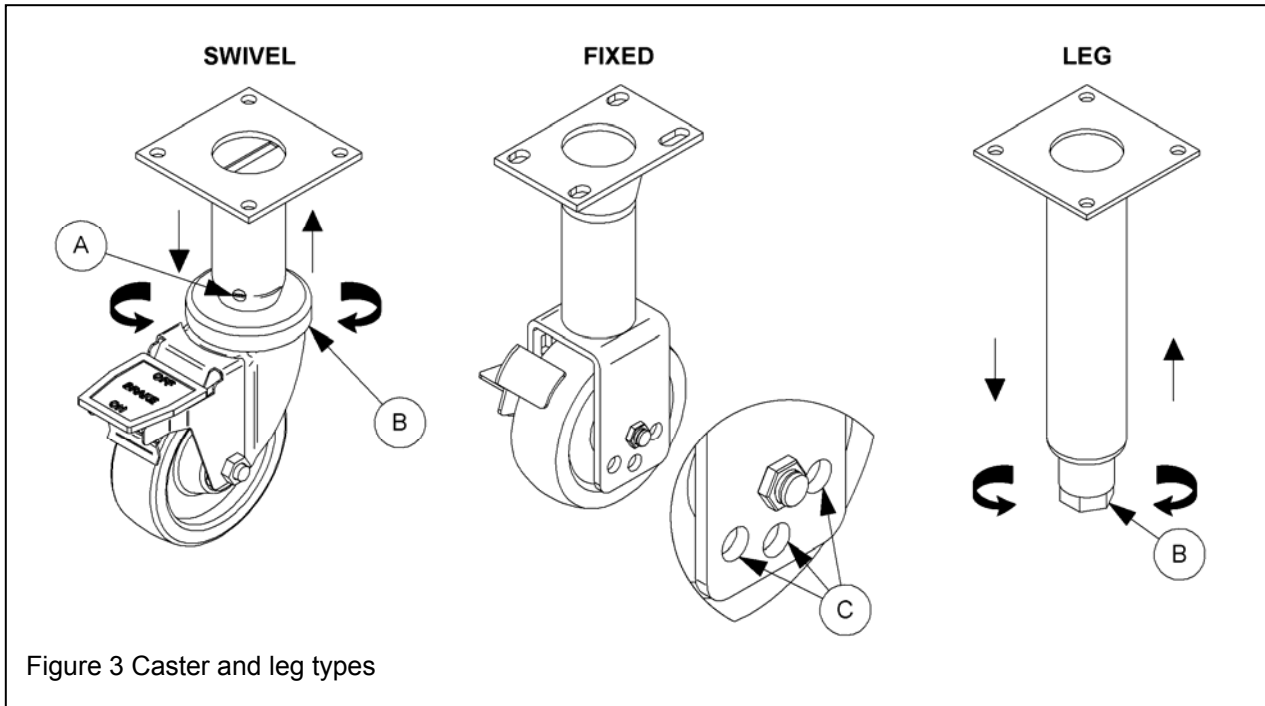
## 2.4 LEVELING THE FRYER- LEGS/CASTERS

<p><b>CAUTION</b></p> <p>To prevent equipment damage and/or personal injury, do not tilt the appliance onto any two of its casters or legs, or pull the appliance by the splash back.</p>
<p><b>WARNING</b></p> <p>This appliance <u>must</u> be installed with the legs or casters provided by the manufacturer.</p>
<p><b>WARNING</b></p> <p>DO NOT perform leveling procedure when appliance is in operation or full of hot liquids. Serious injury could result.</p>

When you receive your appliance it is completely assembled with legs or optional casters. This appliance must be installed with legs or casters; it cannot be curb mounted, or sealed to a base. Curb mounting will seriously inhibit this appliance's ability to effect proper component ventilation. The supplied legs or casters provide the necessary height to meet sanitation requirements and assure adequate air supply for electrical component ventilation. To level the fryer, use the following procedure.

Required tools: Large pair of water pump pliers, Medium flat blade screwdriver, level 12" long max.

- 1 Position appliance in final installed location.
- 2 Apply level across front, and then the left and right side of unit, determine lowest point, and distance to level.
- 3 Add the distance determined in step 2 to caster or leg on the lowest corner of appliance.
  - a. Swivel casters- loosen 2 set screws (A)
  - b. Legs and swivel casters-. Adjust the height of the leg / caster by turning adjustment collar/ foot (B) with water pump pliers until desired change in height is achieved.
  - c. Swivel casters only: Retighten set screws (A).
  - d. Fixed casters- Adjust height by moving wheel and axle to alternate holes in wheel bracket higher or lower as needed. Refer to Figure 3C "FIXED" type caster.
- 4 Adjust remaining casters or legs as needed to insure the appliance is supported evenly at each caster/leg contact point.





## 2.5 ELECTRICAL CONNECTIONS

It is advised that this appliance be connected to a power supply that is controlled by the ventilation system. This will prevent the appliance from being operated without the ventilation hood on.

If your appliance is single phase, it requires a hardwired, flexible conduit electrical connection, using conductors size appropriately for the power requirements listed below. Hardwired units require installation of a restraint device mounted to substantial building structure.

ELECTRICAL REQUIREMENTS		Nominal Amps Per Line (50/60 HZ)															
		Single Phase (2 wire + ground)						3 Phase (3 wire + ground)						3 Phase "Y" (4 wire + ground)			
Model	KW/Hr	200 <sup>2</sup>	208	220	230	240	480	200 <sup>2</sup>	208	220	230	240	480	346/200V	380/220V	400/230V	415/240V
SELV14X	14	65	67	65	61	58	29	37	39	37	35	34	17	23	21	20	20
SELV14TX (both tanks)	14	65	67	65	61	58	29	37	39	37	35	34	17	23	21	20	20
SELV14	17	79	82	78	74	71	36	46	48	45	43	41	21	28	26	25	24
SELV14T (both tanks)	17	79	82	78	74	71	36	46	48	45	43	41	21	28	26	25	24

1. Each fryer requires it's own separate power supply connection. 2. 200V Units will operate at 92% of rated power. 3. Power supply for Basket Lifts and Filter motor is wired into the fryer's high voltage line terminal block, except for 480V. 480VAC line voltage requires a separate single phase service for the filter motor and Basket Lifts( If equipped) rated for 115V,8.0A for North America and 220-240V,4.0A for Export to be installed.

### CAUTION


Connecting the appliance to the wrong power supply may damage the appliance and void the warranty

### WARNING

This appliance must be connected to a power supply having the same voltage and phase as specified on the data plate located on the inside of the appliance door. DO NOT attempt to connect the appliance to an electrical supply other than that indicated on the data plate. Electrical connection should be performed by a qualified electrician

### WARNING

The electrical connection used by this appliance must comply with local codes. If there are no local codes that apply, refer to the National Electrical Code (NEC), ANSI/NFPA 70 for installation in the US. In Canada, refer to CSA Standard C22.2 and local codes. In all other cases, refer to local and national codes and regulations.

The appliance must be grounded in accordance with local code, comply with the NEW and ANSI/NFPA No. 70 latest edition (for US and Canadian installations). In all other cases, refer To local and national codes and regulations. To comply with European requirements, European models are equipped with an equalization-bonding clamp. An equalization bonding lead must be connected to this clamp to provide sufficient protection against potential difference. This clamp, located on the rear of the appliance is marked with the following universal symbol. 

### WARNING

A country approved all pole circuit breaker with a minimum open contact gap of 3mm must be used for proper installation. (CE countries)

### WARNING

This equipment must be installed so that the plug (if used) is accessible unless other means for disconnection from the power supply (e.g: circuit breaker) is provided.

### WARNING

If this appliance is permanently connected to fixed wiring, it must be connected by means of copper wires having a temperature rating of not less than 167°F (75°C), and have a local means of disconnection from all poles from the mains included in the fixed wiring in accordance with local codes.

### WARNING

All power connection wiring for this appliance must be made in accordance with the wiring diagrams(s) located on the appliance.

### CAUTION

Leakage current of this appliance may exceed 10 mA. When permanently connected, a high integrity protective system employing an RCD rated at 30 mA must be used with this appliance.

## 2.6 OPTIONAL CORD SET & PLUG and RESTRAINT CABLE

If your appliance was not equipped with an optional cord set and plug, field connection to electrical power supply will be required. Adhere to all local or national codes and warnings from (see section 2.5) when making field connections to mains. Use the table above to determine conductor rating, and

1. Remove the fryer entrance box cover, Figure 1.5.1.
2. Insert power cable/conduit through hole in fryer cabinet, Figure 1.5.2. Use care when routing power cable/conduit through the fryer to not interfere with actuator movement.
3. Referring to figure 1.5.3, Install cable strain relief in housing cutout (1). Attach power cable wires to terminal block (2) per connection diagram on fryer door.
4. Attach a movement restraint cable assembly to any fryer that is not connected with a cord and plug, Figure 1.5.4.

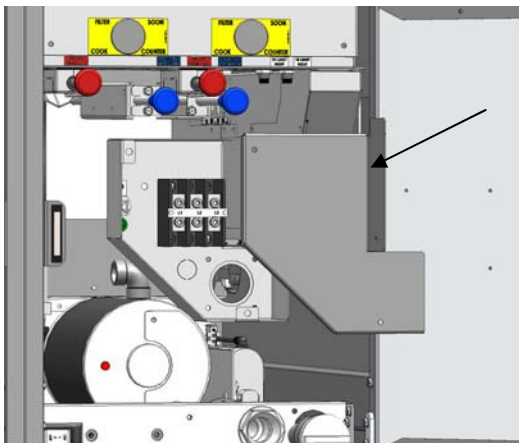


Figure 1.5.1 (Drain line removed for clarity)

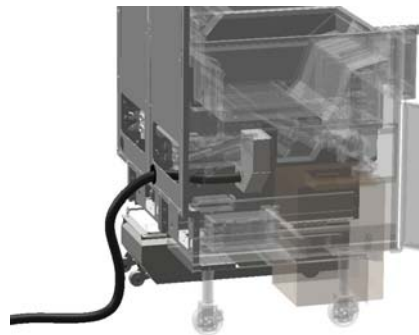


Figure 1.5.2  
Insert flexible conduit through cabinet as shown to prevent contact with moving parts in fryer cabinet.

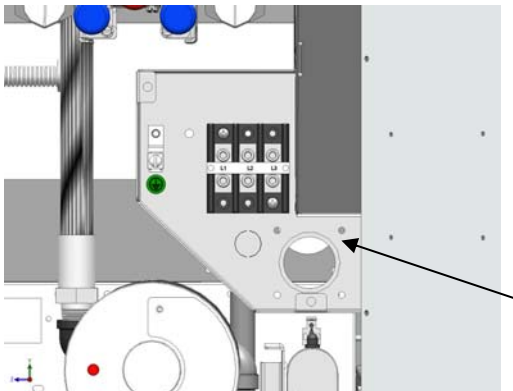
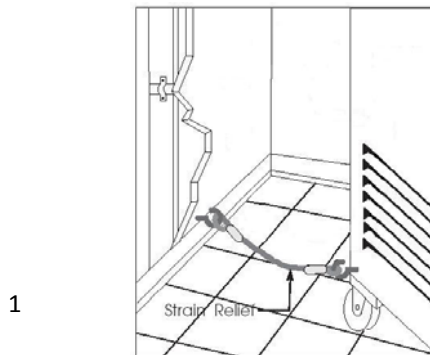


Figure 1.5.3 Wire housing strain relief hole. 2" or 1.75" diameter



1  
Figure 1.5.4: Fryers on casters, or installed with flexible conduit must have a restraint cable between the fryer, and substantial building structure to prevent strain on the electrical conduit.

## 2.7 VENTILATION AND FIRE SAFETY SYSTEMS

Your new appliance must have proper ventilation to function safely and properly. It is very important to install a fire safety system. Your ventilation system should be designed to allow for easy cleaning. Frequent cleaning and proper maintenance of the ventilation system and the appliance will reduce the chances of fire. Ventilation and fire safety systems must comply with local and national codes. Refer to ANSI 83.11 for a list of reference documents that will provide guidance on ventilation and fire safety systems.

## 2.8 INSPECTION

Before you begin filling and operating the appliance, perform the following visual checks:

- ✓ After the appliance is in its permanent location, check to make sure it is level and stable. Any additional leveling that is necessary can be performed as previously described in “Leveling the Fryer”. (See section 2.4)
- ✓ Ensure that high temperature limit probe(s), item 2 in figures 1.7.1 & 1.7.2 below are in place and secure as shown below. Ensure the temperature control probe(s) (item 1) is positioned properly as shown.
- ✓ Ensure the heating elements (3) are free to move up out of the frypot without hitting any structures or other items above the fryer.
- ✓ Review the installation portion of this manual and ensure that all steps have been followed and executed properly.

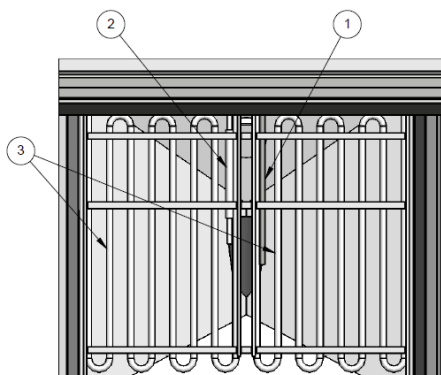


Figure 1.7.1 Frypot view SELV14

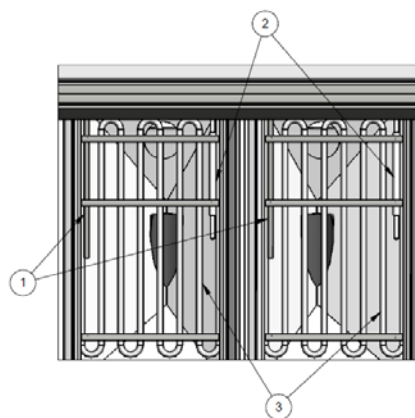


Figure 1.7.2 Frypot view SELV14T

**CAUTION**  
**Solid shortening must not be used,  
or clogged pump lines, and pump damage are possible.**

## 2.9 FILLING THE COOKING TANK

Refer to the following procedure to fill the cook tank prior to operation.

FRY POT OIL CAPACITY:      SELV14X, SELV14 = 30 lbs (13.6 kg)  
   SELV14TX, SELV14T = 16 lbs (6.8 kg)

It is recommended that a high quality liquid frying oil be used.

**Solid shortening must not be used, or clogged pump lines, and pump damage are possible**

1. Verify that the tank interior is clean and free of any construction debris.
2. Rinse the tank and drain line with a small amount of clean cooking oil.
3. Ensure that the drain valve is closed.
4. Fill the tank with oil. You may fill the tank to the "MIN LEVEL" mark or slightly below the nominal level mark: the oil will expand slightly when it heats up, raising the level slightly.

**WARNING**  
**THE PUSH BUTTON TOP OFF SYSTEM IS NOT INTENDED TO FILL FRY POTS.**

**WARNING**  
**Replace shortening that is smoking, or foams when cooking. Old shortenings have reduced flash point, and are prone to surge boiling. Using old shortening may create dangerous conditions**

**WARNING**  
**Do not overload the fry baskets, or allow the oil level to exceed the MAX line while cooking. Wet product, or too much oil in the frypot can lead to surge boiling, and over topping the frypot. Overtopping may create hazards such as burns or slippery floors.**

**CAUTION**  
**This appliance is NOT designed for cooking with water. Severe equipment damage will occur if a fryer is used as a water bath for rethermalizing foods.**

**WARNING**  
**Oil must completely cover the heating elements at all times while appliance is on.**

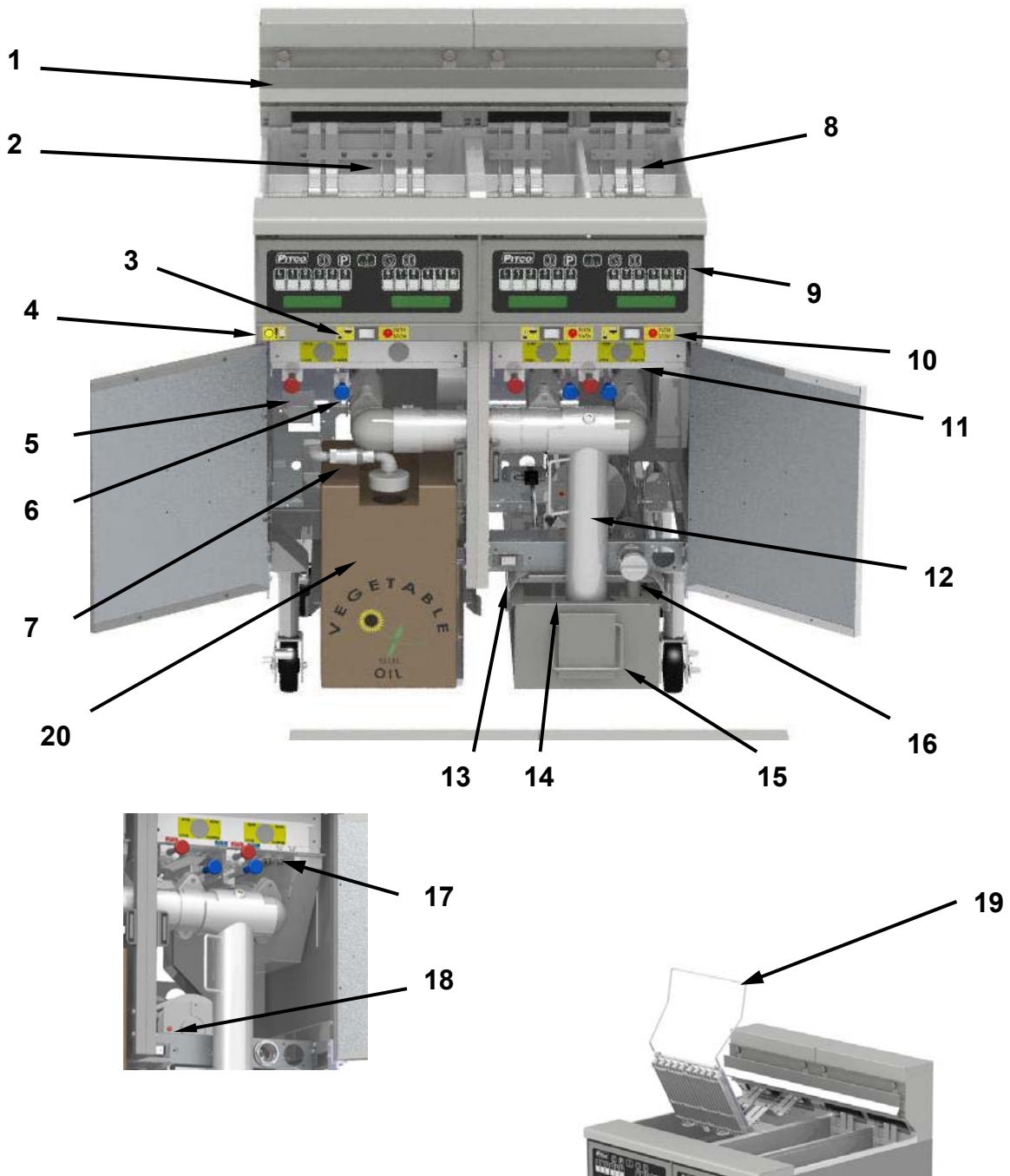
## 2.10 COOKING GUIDELINES

- Don't over fill baskets. Filling baskets more than half full by volume may result in foaming over the top of the fryer.
- Don't overload the fryer. The rated load is 1.5 pounds (.68 Kg) per basket, up to the maximum volume fill noted above. Over filling baskets can cause uneven cooking, and result in oil foaming over the top of the fryer.
- Do not load the fry baskets over the frypot. Removing the baskets from the fryer to load food reduces the need to filter.

### 3 OPERATION

#### 3.1 OPERATIONAL FEATURES

The diagram below outlines some of the key operational components of your appliance. Refer to the following sections of this manual to learn more about these features.




### 3.2 BASIC OPERATIONAL FEATURES

ITEM NUMBER	DESCRIPTION AND FUNCTION
1	<b>Basket Hanger</b> - Holds fry baskets while draining or between loads. Lifts off for easy cleaning.
2	<b>Fry Pot Temperature Probe</b> - Sends oil temperature to cooking control.
3	<b>Oil Top Off Switch (OPTIONAL)</b> - Replenishes oil in frypot.
4	<b>JIB (Jug in Box) Status Light (YELLOW)</b> - Indicates oil jug is nearing empty.
5	<b>Frypot Return Handle (RED)</b> – Pulling the handle opens the frypot return valve, and starts filter pump to filter or refill frypots.
6	<b>Drain Valve Handle (Blue)</b> - Pull to drain frypot.
7	<b>Oil Bottle Connector</b> - Allows jug to be removed from holder.
8	<b>Electric Heating Element</b> - Heats cooking oil to desired temperature.
9	<b>Cooking Computer</b> - Controls frypot temperature, and provides cook time tracking.
10	<b>Filter Soon Indicator (RED)</b> - Based on cooking loads, lights to indicate a frypot should be filtered.
11	<b>Cook Load Counter Selector</b> - Used to establish filtering frequency.
12	<b>Drain Outlet</b> – Swings out to ease shortening disposal.
13	<b>Filter Pump Circuit Breaker</b> - Protects pump motor from over current.
14	<b>Filter Pan Cover</b> - Easily slides out for cleaning.
15	<b>Filter Pan Assembly</b> - Holds oil during frypot cleaning and filtering. Contains filter pick up assembly, and pick up tube
16	<b>Pump Strainer</b> - Prevents debris from jamming filter pump if filter paper rips or is installed poorly.
17	<b>Frypot High Limit Reset Button</b> – Press to reset
18	<b>Filter Motor Thermal Overload Reset button (RED)</b> – Press to reset.
19	<b>Element Lift Handle</b> – Use to lift elements from frypot during cleaning.
20	<b>Fry pot oil top off supply jug</b> - Supplied by others, provides on board storage for fresh cooking oil.

### 3.3 APPLIANCE START UP

Refer to the following procedure to start the appliance prior to operation.

1. Ensure that the drain valve is closed.
2. Fill the cook tank with oil. (See section 2.9 "Filling the Cook Tank").
3. Press the  button to turn the controller on.
4. The appliance is now on and heating the oil in the cook tank.

**WARNING**  
**NEVER operate the appliance with an empty fry tank. It will void the warranty.**

**WARNING**

**Oil level should NOT be allowed to fall below the minimum indicated level line at any time. Dry firing of the elements may cause a fire, and can shorten element service life. Evidence of dry firing will void your warranty.**

**OIL TEMPERATURE**

Keep the oil temperature in the fryer to a maximum of 190°C (374°F). Higher temperatures will cause rapid breakdown of the oil and give you no faster cooking. At 205°C (401°F) to 210°C (410°F) the life of the oil is only one third of its life at 190°C (374°F). In addition, increased decomposition causes the oil to smoke badly even if the temperature is lowered to 190°C (374°F) again. High temperatures give you no advantage, cost you money and increase the fire danger.

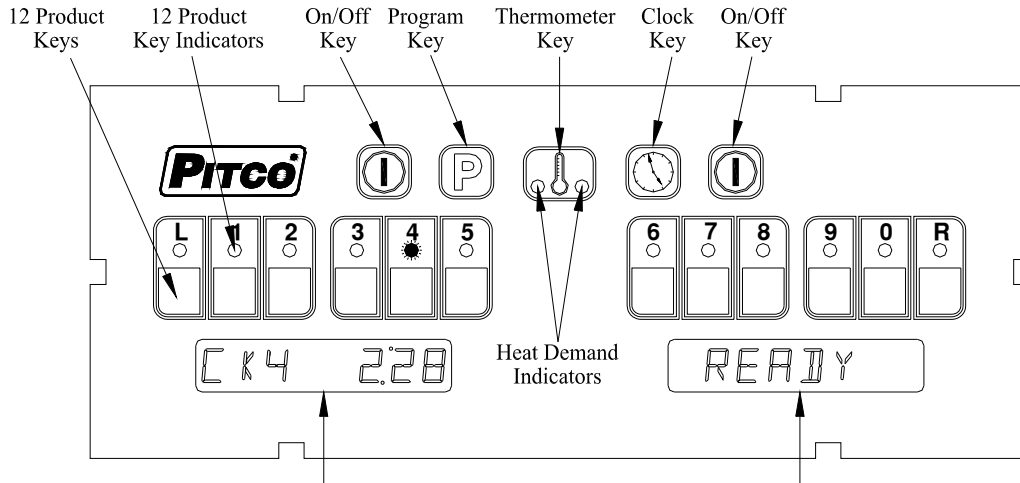
**TEMPERATURE DELL'OLIO**

Mantenere la temperatura dell'olio nella friggitrice fino a un massimo di 190°C. Temperature maggiori causano un rapido degrado dell'olio, senza tuttavia eseguire una cottura più rapida. Da 205°C a 210°C la durata dell'olio è inferiore di un terzo rispetto a quella a 190°C. Inoltre, l'accresciuta decomposizione comporta una forte emissione di fumo, anche se la temperatura viene riportata di nuovo a 190°C. Le alte temperature non prevedono vantaggi, sono antieconomiche e aumentano il rischio d'incendio.

**ΘΕΡΜΟΚΡΑΣΙΑ ΛΑΔΙΟΥ**

Διατηρείτε τη θερμοκρασία λαδιού στη φριτέζα μέχρι 190 βαθμούς Κελσίου. Υψηλότερες θερμοκρασίες θα αλλάξουν τη σύνθεση του λαδιού πολύ σύντομα και δεν ψήνετε γρηγορότερα. Η δυναμικότητα του λαδιού στους 205-210 βαθμούς Κελσίου είναι μόνο το ένα τρίτο της δυναμικότητάς του στους 190 βαθμούς Κελσίου. Επιπλέον η αυξημένη αποσύνθεση του λαδιού, σε θερμοκρασίες πάνω από 190 βαθμούς Κελσίου, κάνει το λάδι να καπνίζει άσχημα κι αν ακόμη κατεβάσετε τη θερμοκρασία κατόπιν πάλι στους 190 βαθμούς Κελσίου. Οι υψηλές θερμοκρασίες δε σας παρέχουν κανένα πλεονέκτημα, σας κοστίζει περισσότερα χρήματα και αυξάνουν τον κίνδυνο πυρκαγιάς.

## 4 COMPUTER CONTROLLER OPERATION



Displays show current operation. Throughout this text, a left only display will be printed as [CK4 2:28]. When both left and right displays should be interpreted together, this text will show them as [CK4 2:28] [READY].

### 4.1 To turn the appliance ON:

If power is applied to the appliance, the displays will show [OFF]. Press the [I/O] key. Displays will show one of the normal displays: [HEATING]; [MELTING] [SOLID]/[LIQUID]; or [READY]. Some messages may show in both left and right displays. Wait for the appliance to heat up to the [READY] condition before cooking.



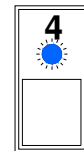
### 4.2 To turn the appliance OFF:

Press the [I/O] key. Display will momentarily show the software version number and then [OFF][OFF]. Use the Left [I/O] key for left side and Right [I/O] key for the right of dual vat control 60126802. Either key may be used on the single vat controller.



### 4.3 To start a cook:

When displays are showing [READY] the appliance has reached set temperature and is ready to cook. Press the desired product key, and place product into the vat. The indicator above the product key will flash to indicate the cook timer is running. In the example above, product 4 is cooking with 2 minutes and 28 seconds remaining. The right side display has no running cook timers, and shows [READY].



Multiple cooks may run together. While cooks are running, the displays will always show the cook with the least time remaining. Longer running cooks will flash their indicators at a slower rate. Cook time remaining on these keys may be checked by momentarily pressing the product key.

### 4.4 To cancel a cook:

Press and hold the product key to cancel a running cook. If no other cooks are pending, controller displays will return to [READY].

### 4.5 To view Actual and Set temperatures:

To view the actual vat temperature, press the thermometer key. The display will show [ACT nnnF] or [ACT nnnC], where nnn is the current vat temperature. After a few moments, the display will return to [READY], [MELT ], or [HEATING] when no cooks are running, or, [CKn mm:ss] for any cooks still running.



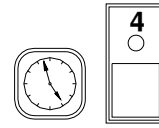
To view the set temperature, press the thermometer key twice. The display will show [SET nnnF] or [SET nnnC], where nnn is the current set temperature. After a few moments, the display will return to [READY], [MELT ], or [HEATING], or, [CKn mm:ss] for a cook still running.





### 4.6 To View Current Settings for cook, shake, and hold times:

To view the current settings for any product key, press the clock key, followed by the desired product key.



The display will show [CKn mm:ss], followed by [SHn mm:ss], then [HDn mm:ss]. Where “n” is the key number, and “mm:ss” are the current settings for time. After a few moments, the display will return to [READY], [MELT ], or [HEATING] , or, [CKn mm:ss] for a cook still running.

**Typical displays using key 4 as an example:**

Key 4 set for 3 minutes and 28 seconds cook time.



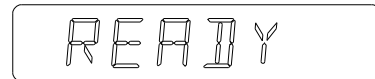
Key 4 Shake Time is set for 2 minutes and :00 seconds before the end of the Cook.



Key 4 Hold Time in set for 10:00 minutes.



In a few moments, the display will return to [READY]



### 4.7 To perform a Boil Out operation:

Normal maintenance of a fryer requires regular tank cleaning. This process involves draining the vat of oil and filling with water.

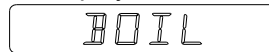
Cleaning solution is added, and the control is set to the boil out mode by one of the following methods:

#### 4.7.1 Automatic Boil Entry (Water Detection):

After filling an empty vat with water, turn the appliance On. Heat will be applied to the vat warming the water. This control will detect the presence of water by temperatures not rising above the boiling point of water; 212°F (100°C). After a time at this temperature, displays will show:



Heat will be disabled until the operator responds to this prompt. Pressing the [0] key is a **YES** response to the boil prompt. If pressed, display will show:



Heat will maintain vat temperature at 185°F (85°C) for cleaning as long as the control remains on. To exit boil mode control must be turned off.

Warning: Pressing any other key at the [PRESS 0] [TO BOIL] prompt is regarded by the control as a **NO** response. With this response, the control will apply heat to the vat as if oil were present in the vat. With water in the vat, a rolling boil will result. This will cause undesirable foam over conditions, and steam burn hazards to operators performing cleaning operations.

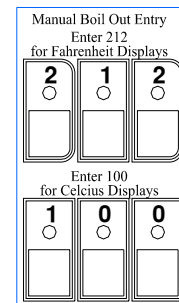
#### 4.7.2 Manual Boil Entry:

After filling an empty vat with water, turn the appliance on. Press the



thermometer key and enter key sequence [2], [1], [2]. *If control is set to display in the Celsius scale, press [1], [0], [0] keys to manually enter boil mode.* The display will show [ BOIL ] to indicate entry into boil mode.

To exit boil mode, control must be turned off.

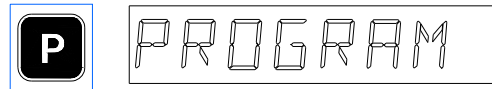


### 4.8 To Enter Programming Level 1 (for the Store Manager):

**Note:** The factory default setting for this control does not require an operator password to be entered. However, the operator password requirement and value may be changed in (See section 4.12 “To Enter Programming Level 2” (For the Store Manager). This text assumes the operator password is disabled. Entry of a password when NOT required will not interfere with the programming process.

With no cook timers running, displays will show one of the following displays: [HEATING], [MELT] [LIQUID (or SOLID)], or [READY].

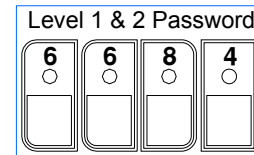
Press the [P] program key. Left display will show [PROGRAM]. Right display will be blank.



Enter password 6684 using the product keys as numeric keypad for entry.

Display still shows [PROGRAM].

From the [PROGRAM] display, continue with this section or go to section 3.



### 4.9 To Set Cook Temperature:

Press “P” key then press the thermometer key once for Single Vat (left side of Dual Vat) or press key twice for Dual Vat (right side of Dual Vat).



The display will show [SET xxxF] [TEMP] or [SET xxxC] [TEMP], where “xxx” is the temperature setting. Use the product keys for numeric entry to adjust the current setting. Press the [P] key to save setting. Display now shows [PROGRAM]. To exit here, press [P] again, or continue.



### 4.10 To Change a Product Key–Cook, Shake, Hold, and Hold Pre-Alarm Times:

For each product key, Cook, Shake, Hold, and Hold Pre-alarm times are set in this section. With display showing [PROGRAM], continue with the following section for each product key to change.

#### 4.10.1 Cook Time

Cook Time may be set for each product key. To deactivate any product key enter a zero value for cook time.

Press the [Clock] key. Display will show [SELECT] [PRODUCT]. Press the desired product key to change.



The display is now showing [nCK mm:ss] [TIME] where “n” is the key number, “CK” means Cook, and “mm:ss” is minutes and seconds. Use the product keys for numeric entry to adjust the current setting. Press the [Clock] key to save cook time and continue setup for this product key.

#### 4.10.2 Shake Time

Shake time is an alarm that sounds during Cook Time to prompt operators to shake the basket. Default for this value is zero, meaning the Shake Time is inactive. To use Shake Time, time value must be a non-zero value, and must be set to a value less than cook time.

Display shows [nSH mm:ss] [TIME] where “n” is the key number, “SH” means Shake, and “mm:ss” is time in minutes and seconds.



Use the product keys for numeric entry to adjust the current setting. Press the [Clock] key to save shake time and continue setup for this product key.

**Note:** Cook Time minus DisplayShake Time = Shake Value Entry, Example: 3:00 cook time with a 2:00 shake time, the value you enter would be 1:00 minute.

#### 4.10.3 Hold Time

Cooked product may stand in holding bins for a period of time. This timer produces an alarm to inform operators to discard old product and start a new cook. Default for this value is zero, meaning the Hold Time is inactive.

Display is showing [nHD mm:ss] [TIME], where “n” is the key number, “HD means HOLD, and “mm:ss” is minutes and seconds.

Use the product keys for numeric entry to adjust the current setting. Press the [Clock] key to save hold time and continue setup for this product key.



#### 4.10.4 Hold Pre-Alarm

Hold Pre-Alarm is a timer setting that is used to warn operators that the Hold Time is about to expire. To use Hold Pre-Alarm, time value must be a non-zero value, and must be set to a value less than Hold Time. Default value is zero, meaning the Hold Pre-Alarm is inactive.

Display is showing [nPA mm:ss] [TIME] where “n” is the key number, PA means Pre-Alarm, and “mm:ss” is minutes and seconds.

Use the product keys for numeric entry to adjust the current setting.

Press the [Clock] key to save cook time and continue setup for this product key.

*Note: Value entered for Hold pre-alarm time is the hold time minus the pre-alarm time. Example: 15:00 hold time with a 5:00 prealarm time, the value you enter would be 10:00 minutes.*

Display will again return to [SELECT] [TIME]. Repeat steps from 1 to make changes to any other product keys or continue.



### 4.11 To Exit Level 1 programming:

Display shows [SELECT] [TIME]. Continue to make changes or exit here in next step.

Press the [P] key.

Display shows [PROGRAM].

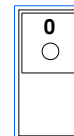
To exit Level 1 programming, press the [P] key again.

Displays will show [HEATING], [MELT] [LIQUID (or SOLID)], or [READY].



### 4.12 To Enter Programming Level 2 (for the Store Manager)

The display must show [PROGRAM] from (See section 4.8 “To Enter Programming Level 1” (For the Store Manager). to change these options. When the product key [0] is pressed, the display will show [SELECT] [OPTIONS]. Indicator lights above product keys will illuminate to represent options that may be changed. Each option listed below uses the product key [0] to toggle or scroll through available choices in the display. When the correct value is displayed, press the [P] key to save choice. The display will again return to [PROGRAM] for another option selection.



### 4.13 Fahrenheit or Celsius Display:

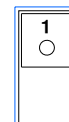
The Controller will display temperatures in the Fahrenheit or Celsius scales. The default scale is °F. With display showing [PROGRAM], press the product key [0].

Display shows [SELECT] [OPTIONS].

Press product key 1, display shows [DEGREE n] [F OR C], where “n” is the current setting.

Use the product key [0] to scroll through choices (F or C). Press [P] key to save choice.

Display shows [PROGRAM].



#### 4.14 Password Change or Required?

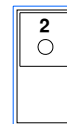
With factory settings, an operator password is not required to enter programming Levels 1 and 2. The password may be activated or changed in this section.

With display showing [PROGRAM], press the product key [0]. Display will show [SELECT] [OPTIONS].

Press product key 2, display shows [SET PASS] [NEW PASS]. Use the product key [0] to scroll through choices [NO PASS] or [PASS REQ]. Press [P] key to save choice.

If [NO PASS] is selected Display returns to [PROGRAM].

If [PASS REQ]. is selected, display will show [PASSnnnn] [NEW PASS] to prompt for new password. Displayed value “nnnn” is the current password. Use the product keys for numeric entry to change password. Press [P] key to save choice. Display shows [PROGRAM].



*Note: The factory default password (6684) will always work even if a different password is selected above.*

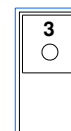
#### 4.15 Beeper Volume and Tone:

Volume and Tone of the beeper alarm may be changed in this section. Volume ranges are 1,2 and 3, where 3 is the loudest setting.

With display showing [PROGRAM], press the product key [0].

Display will show [SELECT] [OPTIONS]. Press product key 3, display shows [VOLUME n] [BEEPER]. Use the product key [0] to scroll through choices (n= 1,2,3, or T). Beeper volume will change as each selection is made.

If “T” is selected an additional display is shown, [TONE n] [BEEPER]. Use the product key [0] to scroll through choices (n= 1,2,3). Beeper tone will change as each selection is made. Press [P] key to save choice. Display shows [PROGRAM].



#### 4.16 Language Selection:

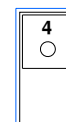
With display showing [PROGRAM], press the product key [0].

Display shows [SELECT] [OPTIONS].

Press product key 4, display shows [ENGLISH] [LANGUAGE].

Use the product key [0] to scroll through choices (ENGLISH, ESPANOL, FRANCAIS, DEUTSCH, HOLLAND).

Press [P] key to save choice. Display shows [PROGRAM].



#### 4.17 Melt Cycle Type:

This adjustment allows selection of the melt cycle type, or, disabling the melt cycle requirement when starting the appliance from a cold start.

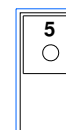
With display showing [PROGRAM], press the product key [0].

Display will show [SELECT] [OPTIONS].

Press product key 5, display shows [LIQUID], the default setting.

Use the product key [0] to scroll through choices (liquid, solid, no melt).

Press [P] key to save choice. Display will again return to [PROGRAM].



#### 4.18 Recovery Test Value:

This controller maintains a record of heat up times for the appliance. A poorly running appliance will have increased recovery times stored in this display. There is no selection done here, just the display of recovery time values.

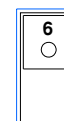
With display showing [PROGRAM], press the product key [0].

Display shows [SELECT] [OPTIONS].

Press product key 6; display will show [RECOVERY] [TEST].

Press the product key [0]. Display will show [FnnnLyyy], where nnn is the factory recovery value, and yyy is the last warm up recovery value.

After recording these values, press the [P] key. Display returns to [PROGRAM].



#### 4.19 Control or Timer: (Left side of Dual or Single Vat)

With display showing [PROGRAM], press the product key [0].  
 Display shows [SELECT] [OPTIONS].  
 Press product key 7; display will show [CONTROL].  
 Use the product key [0] to scroll through choices (Control, Timer).  
 Press [P] key to save choice. Display shows [PROGRAM].

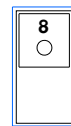


**Note: If timer is selected, heat control outputs are disabled, leaving only the timer functions active. Do not make this selection on Solstice fryer models.**

#### 4.20 Control or Timer: (Right side of Dual Vat)

**Note: This key has no function of single vat controls.**

With display showing [PROGRAM], press the product key [0].  
 Display shows [SELECT] [OPTIONS].  
 Press product key 8; display will show [CONTROL].  
 Use the product key [0] to scroll through choices (Control, Timer).  
 Press [P] key to save choice. Display shows [PROGRAM].



**Note: If timer is selected, heat control outputs are disabled, leaving only the timer functions active. Do not make this selection on Solstice fryer models.**

#### 4.21 OTHER DISPLAYS:

[PROBE OP] [OPEN]

Open probe detection is standard on all Pitco controls. If probe is detected open, normal heating and cooking activities are suspended.

[HIGH TMP] [HIGH TMP]

This display warns operators that the vat temperature has exceeded set temperature by 40°F (22°C), or an absolute maximum of 410°F (210°C). This display does not show the status of the mechanical high limit switch.

[DRAINING] [TURN OFF]

This message indicates that the drain valve has been opened, the vat is assumed to be empty by the controller. Normal heat control activities are suspended. To restore to normal operation, close the drain valve. Display will show [TURN OFF] [TURN OFF].

Turn controller off, and refill the vat. Continue with normal operations at (See section 4.6).

[HEAT] [FAILURE] OR [IGNITION] [FAILURE]

This message indicates that the heating system failed to respond. Typically, the high temperature limit switch has tripped and is in need of resetting. In the case on gas fired appliances, this message will display if the pilot fails to light or is detected marginal by the ignition module.

[SYSTEM] [FAILURE]

This message indicates a shorted probe. If probe is detected as a short circuit normal heating and cooking activities are suspended.

#### 4.22 APPLIANCE SHUTDOWN

Refer to the following procedure to shutdown the appliance.

Press and hold the computer control  button to turn the controller OFF

## 5 OIL MANAGEMENT

### 5.1 PUSH BUTTON OIL TOP OFF SYSTEM

Refer to the following procedure to perform easy cooking oil replenishment.

***It is not intended for filling the frypot.***

(If yellow light comes on for LOW OIL BOTTLE it indicates that oil jug is getting low.)

1. TOP OFF LOW FRYPOT. Press and hold switch to replenish frypot oil as needed.
2. Remove Oil jug holding compartment that is provided (except on Solofilters) Insert cap assembly hose. Lower until cap rests on edge of jug. Return to cabinet.

LOW BOTTLE LIGHT



FRYPOT TOP OFF SWITCH

### 5.2 AUTOMATIC OIL TOP SYSTEM (OPTION)

Pitco offers the “Automatic Oil Level Control” option (Auto-Top Off) to maintain the optimal oil level in your Pitco fryer. This optional system minimizes the need for the operators attention during busy cooking hours. The system maintains oil levels in the frying vat by adding small amounts of fresh oil when appropriate. Replenishment oil is drawn from a Jug In Box (JIB) located in one of the cabinets in a multiple vat build. Alternately, the JIB can be remotely located within nine feet of the fryer. The system can also accommodate a bulk oil system.

The Oil Level Driver Board (OLDB) works with the Filter Control Board (FCB) to maintain proper cooking oil levels. An optional “Manual Fill Switch” to allow operators to add fresh oil at their discretion can also be supplied.

Fresh oil is added to a low vat by using the same pump that is used for filtering. Because the pump has multiple purposes (filtering and topping off the vat), the Filter Control Board (FCB) will prevent the any “top off” event during filtering.

The system’s “Oil Level Drive Board” samples the oil level probe continuously and determines when to add fresh oil to the vat. The “Enable Input” allows a top off event only when it’s appropriate.

There are specific conditions when fresh oil should not be added to the vat:

- 1) Cook Cycle
- 2) Heating Cycle
- 3) Melt Cycle
- 4) Filtering Cycle
- 5) Control in the “OFF” state

The “Enable Input” is active only when the cooking control is at cooking temperature *and* an idle condition. Typically the cooking control displays “READY” or “DROP” when idle. Without the “Enable Input” active, the “Oil Level Drive Board” will not top off the fry vat.



### 5.3 QUICK STRAIN FILTERING “Filter Soon” light flashing

(WARNING: Turn OFF Fryer, before filtering. Wear oil proof, insulated gloves while filtering.)  
Refer to the following procedure for quick strain filtering.

FILTER SOON LIGHT. When flashing, perform a “Quick Filtering” as soon as business levels permit.

1. TURN Fryer OFF. Pull BLUE drain handle to drain oil from fry tank.
2. Grab element handle and lift to rotate the elements out of the frypot.
3. Pull RED handle turn pump ON.
4. Rinse fry pot 30 seconds. Use brush to clear debris through drain. Push BLUE handle in.
5. When bubbles appear in oil, push RED handle in.



### 5.4 COOK COUNTER ADJUSTMENT

The Pitco SELV14 is a Low oil volume fryer. Low oil volume fryers have smaller cold zones than standard fryers, and may require filtering during the cooking day. Excessive sediment levels in the bottom of the frypot, can cause shortening to break down prematurely. The cook counter makes it easy to know when to filter each fryer. Quick filtering as often as possible is an easy way to insure the benefit of longest possible shortening life.

It is necessary for managers to determine filtering frequency on a fryer by fryer basis to prevent sediment build up. Once you have determined how many loads of various products can be cooked without over filling the bottom of the fryer, set the cook counter to that number. In general, products which create a small amount of sediments, can use higher numerical settings. Foods with high breading fall off, use lower numbers.



1. Use a flat screwdriver to remove cover.
2. Set selector knob based on products cooked in this fryer. Depending on sediment fall off select from 1-15. (light fall off products=15), (heavy fall off products=1).
3. Replace cover.

### 5.5 FLUSH HOSE OPERATION (if equipped)

The cooker tank can be rinsed cleaned by using a filter flush hose (if equipped). Refer to the following procedure to operate the filter flush hose.

1. Turn the appliance OFF.
2. Pull the blue drain handle down to drain oil/shortening from the cooker tank into the filter pan.
3. Connect the filter flush hose to the quick connecting fitting.
4. Point the filter hose nozzle outlet into the cooker tank.
5. Pull the yellow handle to turn the pump on and allow oil/shortening to flow through the flush hose.
6. To refill the tank, lift the blue drain handle up.
7. Then the tank has completed filling, push the yellow handle to deactivate the pump.

## 6 ROUTINE CLEANING

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### 6.1 CLEANING SCHEDULE

Performing the preventative maintenance steps below on a daily basis will keep your equipment safe and at peak performance. During the cooking process, oil/shortening may spill and splatter and requires immediate attention. Furthermore, during the cooking process, particles, crumbs and crackling collect inside the cooker tank reducing product quality and decreasing oil/shortening life. If you are producing high quantities of fried food and/or frying heavily battered food, it may be necessary to perform the **QUICK STRAIN FILTERING** (See section 4.25) more than once a day.

**WARNING**

**The power supply must be disconnected before cleaning and servicing this appliance!**

**WARNING**

**Wear protective gloves and clothing when cleaning and draining the appliance and when disposing of water. The water is extremely hot and can cause severe injuries.**

**CAUTION**

**DO NOT leave the appliance unattended during cleaning. Never let the liquid level go below the elements.**

## 7 START OF DAY

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### 7.1 REPLACING THE FILTER MEDIA (if equipped)

**ATTENTION: INSTALL NEW FILTER DAILY**- more frequently if scraping the sediment does not restore full pump flow rate. Oil will return to frypot slowly if the filter is dirty.

**1. Clean Filter Parts**

- Clean filter parts in a pot sink, using detergents to emulsify cooking oil film. Allow parts to fully air dry before installing filter. (wet parts will make the filter soggy and tear open)

**2. Installing a New Filter Envelope** (A6667101 for replacement envelope)

- Insert support screen with fitting facing hole in filter
- Fold open end of paper down
- Slide clip assembly over folded end of envelope assembly and attach clip assembly to filter support fitting and tighten nut.

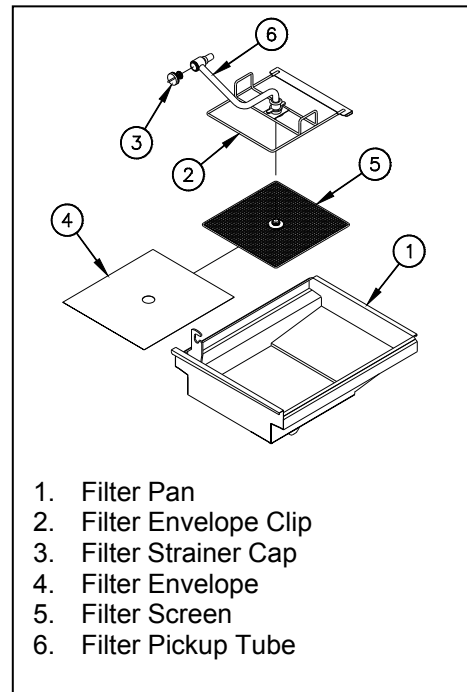
**3. Pick up Tube Strainer** (Oil will return slowly if strainer cap is loose or dirty)

Check pick up tube strainer is clear each time the filter is changed. Insure that the strainer is installed tightly on housing. Push filter pan into rail under fryer until the pan stop is reached



Refer to the following procedure to replace the filter media if the appliance is equipped with a filter drawer.

1. Detach the pickup tube from the filter pickup assembly by unscrewing it (counterclockwise), at the knurled fitting, from the threaded fitting on the filter screen.
2. Slide off the filter paper clip and remove used filter paper from filter screen. Replace with new filter paper, ensuring that the hole in the paper is on the top, so that threaded fitting in filter screen protrudes through it.
3. Fold filter paper to the underside of the filter screen and replace filter paper clip.
4. Re-attach filter pickup tube to the filter screen by screwing it (clockwise) into the threaded fitting in filter screen.
5. Reinstall the filter pickup assembly into the filter system by placing the newly covered screen portion of the assembly into the filter pan and connecting the quick disconnect on the filter pickup assembly into white donut fitting on the left-hand side of the appliance. Ensure that it snaps tightly and securely into donut fitting.
  - Lift BLUE drain valve handle up.
  - Fill fryer



## 8 DAILY CLEANING INSTRUCTIONS

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**WARNING:** Turn Fryer Off, before filtering. Wear oil proof insulated gloves (not Shown)  
It is recommend that the filter media be cleaned at least daily or whenever the pump rate becomes noticeably slower longer than 2.5 minutes

1. TURN FRYER OFF
2. Pull BLUE drain handle to drain fry pot. Use the drain clean out rod if the frypot doesn't drain immediately.
3. Pull RED handle to start pump
4. Brush crumbs from sides and bottom. Allow all sediment to drain.
5. Wipe frypot
6. Push RED handle in
7. Use water dampened cotton towel to remove crumb ring. (detergents are not recommended in this step)
8. Pull RED handle (Allow oil to circulate for 10-15 minutes)
9. Refill. Push BLUE handle in. When air bubbles appear push RED pump handle in.

## 9 END OF DAY

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### 9.1 CLEANING THE COOK TANK

**WARNING:** Turn Fryer Off, before filtering. Wear oil proof insulated gloves (not Shown)

1. Turn the appliance off. Drain all the oil from the tank and allow the tank to cool.
2. Remove baskets, tank rack, and basket hanger for cleaning.
3. Using the cleaning brush, remove all the loose debris and scrub all tank surfaces.
4. For tougher carbonized oil and carbon buildup scrub tank using a Scotchbrite or other abrasive pad.
5. Wipe residue with a clean damp cloth and carefully dry any remaining oil/shortening droplets from the tank before returning oil into the tank.
6. Clean and dry baskets, tank rack and basket hanger before reinstalling

### 9.2 CLEANING THE CABINET

1. Wipe any spilled oil, dust, and lint from the cabinet exterior with a clean damp cloth and a mild food grade detergent .Be careful not to get any water or detergent in the oil. Use a nonabrasive pad for tougher stains if needed.
2. Remove detergent from all surfaces.
3. Cleaning the interior cabinet requires a clean cloth to remove any oil, dust, lint or filter powder from the interior of the cabinet.

### 9.3 FILTER CLEANING (If Equipped)

1. Unscrew filter strainer cap from pickup tube and gently tap it to dislodge any crumbs from the slots. Use a clean cloth to remove any remaining crumbs and reattach.
2. Scrape all loose debris and crumbs from filter pickup assembly and filter pan with the filter scoop shovel.
3. Remove filter pickup and place in pot sink, power soak sink or dishwasher for cleaning. Be sure to rinse thoroughly and dry all surfaces before re-assembly.
4. Wipe the filter pan with clean damp cloth and a food grade detergent. If necessary place pan in pot sink to rinse all the detergent from the surfaces and dry all surfaces before re-assembly.

## 10 WEEKLY PREVENTATIVE MAINTENANCE

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Performing the preventative maintenance steps above on a daily basis will keep your equipment clean and safe. On a weekly basis these additional steps should be performed.

1. Turn the fryer off. Allow the oil to cool to before pulling the fryer away from the hood. Hint: This maintenance may be ideal to perform on the day the oil is being changed so no oil is present in the tank or filter.
2. Disconnect the power cord(s), gas hose, and retention lanyard.
3. Wearing your personal protective equipment, pull the fryer away from the hood.
4. Check that vent hood drip cup is empty and not dripping oil into the flue.
5. Check that the hood baffles are clean and not dripping oil into the flue.
6. Clean the fryer sides, back and the flue area, it may be necessary to use a non-abrasive pad to scour and a putty knife to scrape the oil buildup. With a clean damp cloth and food grade detergent wipe the area clean.
7. Wipe up any excessive oil on the power cord(s) and gas hose with a dry cloth.
8. Check flue pipe for any foreign debris/object and remove if found.
9. Reattach power cord(s), gas hose, retention lanyard and push fryer back under the hood
10. Check that wires and cords are not frayed or loose in and out of the cabinet.
11. Check around the appliance for loose parts or accessories that need to be secured or other foreign items (ex: Aerosol cans) that should be removed from the area.

**WARNING**

**Serious injury could result from direct contact with hot surfaces and/or oil. Always wear apron, heat resistant gloves for skin protection and goggles for eye protection**

**WARNING**

**Read the operation section of this manual prior to filling or operating the appliance.**

## 11 MONTHLY PREVENTATIVE MAINTENANCE

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Food debris and oil/shortening can buildup inside the tank. Performing the monthly preventative maintenance steps below will keep your equipment safe and at peak performance. If you are producing high quantities of fried food and/or frying heavily battered food, it may be necessary to clean these components more than once a month.

### 11.1 BOIL OUT PROCEDURE

Wear protective gloves and clothing when cleaning and draining the appliance. Oil may spatter and will cause injury to personnel.

1. Read the “operation” section of this manual prior to filling or operating the appliance.
2. Turn the appliance off. Drain all the oil from the tank and allow the tank to cool. The container must also be able to withstand 400°F (205°C) temperatures.
3. Remove baskets, tank rack and basket hanger for cleaning.
4. Remove and discard any large debris inside the tank.
5. Close the drain valve and fill the tank with potable water to the “oil level” line.
6. Place the appliance into boil mode:

Turn the appliance ON. The controller will recognize that there is water in the tank and automatically enter boil mode. To enter boil mode manually, press the Temp Key then keys 2, 1, 2 for degrees F or 1, 0, 0. for degrees C.

7. Once the water reaches a simmer, add 8 to 10 ozs (227 to 283 g) of Pitco cleaner for every 25 lbs (11.3 kgs) of oil/shortening your fryer is rated to hold.
8. Simmer for 1 minute. (The water should never be allowed to boil as this may splash over the tank side and cause permanent damage to the components.)
9. Turn the appliance OFF and allow the fryer to soak for 15 to 30 minutes, allowing the cleaner to soften the oil/shortening deposits and carbon.
10. Scrub the inside of the tank using a cleaning brush safe for hot water. Care must be taken to remove all the foreign material on the tank, heating tubes, sidewalls and other components in the tank.
11. Drain and dispose of the cleaning solution. **CAUTION: Cleaning Solution is HOT.**
12. Once the tank has cooled, rinse with clean potable water thoroughly.
13. Remove all remaining water and residue with a clean dry cloth.
14. Clean and dry baskets, tube rack and basket hanger before reinstalling
15. Close the drain valve and fill the cooker tank with oil.

## 11.2 TEMPERATURE CHECK

Use a high grade pyrometer or digital thermometer suitable for temperature up to 380°F (182°C). Place the thermometer in the oil above the tip of the fryer's temperature probe with in 1" (2.54 cm) 25.4 mm). Be sure not to touch the heat tube since this will measure incorrect temperatures.

Check that the controllers set point and thermometer is within +/- 5°F (2.8°C). If your measurement are off, re-measure again before contacting an Authorized Service Company for further assistance.

## 12 ANNUAL/PERIODIC PREVENTATIVE MAINTENANCE AND INSPECTION

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This section should ONLY be performed by a qualified service technician as part of a regular kitchen maintenance program. This inspection should take place a minimum of once a year by an Authorized Service Technician recommended by Pitco. It may be necessary perform this inspection more than once a year.

### 12.1.1 SAFETY EVALUATION

- ✓ Check power cord and plug.
- ✓ Check all exposed wiring connections, switches, and indicator lights.
- ✓ Check legs, casters, wheels, plate welds and ensure all nuts and bolts are secured.

### 12.1.2 MECHANICAL INSPECTION

- ✓ Check fry tank for shortening leaks and excessive oil build up
- ✓ Check for oil migration (Clean as required)
- ✓ Check hood drain cup, ensure that it is not dripping onto the appliance. Empty as necessary.
- ✓ Check hood baffle for clean surface, oil/water condense can drip onto appliance.
- ✓ Check drain/filtration system (if equipped) for leaks
- ✓ Check for missing fryer parts.
- ✓ Check for missing fasteners

### 12.1.3 TEMPERATURE CONTROL SYSTEM

- ✓ Check electrical connections and harnesses
- ✓ Check temperature probes and limits for carbon build up and plating. Clean as required
- ✓ Check proper mounting of probes and sensors and verify all fasteners are secure.
- ✓ Check DVI Drain Valve Interlock drops out controller.
- ✓ Check Controller/thermostat features to ensure they are functioning.
- ✓ Check Temperature Calibration

### 12.1.4 FILTER SYSTEM (IF EQUIPPED)

- ✓ Check electrical connections and harnesses.
- ✓ Check IEC power cords are fully engaged and secure.
- ✓ Check for any air or shortening leaks and for excessive oil build-up.
- ✓ Check O-Ring on filter pickup tube and replace as needed.
- ✓ Check filter strainer on pickup tube.
- ✓ Check operation of drain valve and DVI drain valve interlock.
- ✓ Check operation of return oil valve and its pump switch.
- ✓ Check all hardware in filter pan.
- ✓ Check filter operation by filtering the fryers.
- ✓ Check pump motor amp draw compare to nameplate amperage.
- ✓ Check pump and motor; clean any excess oil from pump assembly.
- ✓ Check all filter hoses for leaks and integrity.

**12.1.5 HEATING ELEMENT**

- ✓ Check if the element is mechanically strong and in good condition. Look for scale build up and inspect for signs of dry firing.
- ✓ Verify element wires are in good working condition. Look for damage to wires or frayed insulation. Check that the insulation is dry.
- ✓ Verify that bulkhead connections/nut is tight and leak free. Look for grease build up and oily surfaces.
- ✓ Verify amp-draw is within range as compared to the information on the data plate.

**12.1.6 CONTROL BOX & ELECTRICAL COMPONENTS**

- ✓ Verify that heating contactors are in good condition. Check for worn or pitted contacts. Verify that wires are tight and in good condition.
- ✓ Verify that all components (transformer, terminal block, relays, drain switches, etc...) are in good condition. Verify that wires are tight and in good condition.
- ✓ Verify enclosures are free of leaks. Check for water stains and wet surfaces.
- ✓ Verify that the covers and panels are intact and provide a safe condition. Check for loose parts.
- ✓ Verify power cord is in good condition. Check for frayed or exposed wires. Verify that the insulation is in good condition and the attachment to the appliance is tight.

## 13 TROUBLESHOOTING

### 13.1 POWER FAILURE

If electric power is removed for any reason, the appliance will shut down.

To restart the appliance, follow the appliance start up procedure in (See section 3.3.)

**CAUTION**  
**DO NOT attempt to operate this appliance during a power outage.**

### 13.2 HIGH TEMPERATURE LIMIT

This appliance is equipped with a high temperature limit switch. The high temperature limit switch will stop the appliance from heating if the internal cook tank reaches an unsafe temperature. In the event that the high temperature limit has tripped, Please refer to the following procedure to reset the switch.

- a. Turn the appliance off.
- b. Allow the appliance time to cool to room temperature.
- c. Add oil to the cook tank as needed.
- d. Remove the access screw located under the basket support. Picture 1.
- e. Use a small diameter tool ( 1/8" maximum) such as a small Philips screwdriver to press the reset button. Picture 2.
- f. Install the Access cover screw.
- g. The high limit switch is now reset and the appliance is ready for start up.
- h. If the reset becomes tripped again, discontinue using the fryer, and call for service.



Picture 1  
 Use a flat screw driver to remove the screw marked "Reset Button"(Full pot shown). SELV14T reset buttons are under the outer Screws.



Picture 2  
 Use a small diameter rod (1/8" max.), or a Philips screwdriver to reach through the access hole and press the reset button.

**WARNING**  
 DO NOT add oil to the fryer until it has been given ample time to cool down. Failure to do so may result in damage to the appliance and/or injury to the operator.

### 13.3 DRAIN VALVE INTERLOCK

Your appliance is equipped with a drain valve interlock circuit to prevent the appliance from heating if the frypot drain valve is opened. Refer to the following procedure to resume operation after the drain valve interlock is tripped.

1. Turn the appliance OFF.
2. Close the tank drain valve and fill the tank with oil/shortening.
3. Turn the appliance ON.

## 14 TROUBLESHOOTING CHARTS

### 14.1 FRYER TROUBLESHOOTING CHART

Problem	Probable Causes	Corrective Actions
Computer Controller display doesn't light.	No power to appliance.	Check main building power supply.
	Circuit Breaker tripped.	Reset circuit breaker.
	Power Cord loose or not connected.	Connect power cord. Check power cord where it enters the rear of the fryer's entrance box. Verify that it is plugged all the way into the receptacle.
	Fuse blown.	Contact Authorized Service Company.
	Transformer Defective.	Contact Authorized Service Company.
	Defective Controller.	Contact Authorized Service Company.
Controller is on and appliance will not heat up.	Computer is in Melt Cycle	Allow time for unit to heat up.
	High temperature limit has tripped.	Allow appliance to cool and reset High temperature limit.
Appliance will not maintain temperature properly.	Faulty temperature probe.	Contact Authorized Service Company.
	Faulty High temperature limit.	Contact Authorized Service Company.
Computer display shows off and can not be turned on.	Faulty computer	Contact Authorized Service Company.
Oil Temperature is hotter, or cooler than shown by Computer Controller	Temperature Calibration	Refer to section 3.8
	Defective Temperature Probe	Contact Authorized Service Company.
Computer Controller displays "DRAINING" or "TURN OFF"	Blue drain valve is not completely closed.	Close blue drain valve handle.
	Improperly adjusted or defective drain switch.	Contact Authorized Service Company.
Computer Controller displays "PROBE OP" "OPEN"	Open temperature probe	Contact Authorized Service Company.



## 14.2 FILTER TROUBLESHOOTING

Problem	Probable Causes	Corrective Actions
Drain Valve is open; the oil is draining slowly or not at all.	Drain valve is not fully open	Press down on the drain valve handle and verify that it is fully open.
	Drain is plugged with debris.	Use the clean out rod to clear the drain valve opening. If this doesn't clear the blockage, close the drain valve and contact a qualified service technician.
Pump return handle is pulled out, but no pumping sound can be heard.	Red return valve handle is not completely open.	Pull on the red return valve handle to make sure it is completely open.
	Filter circuit breaker is tripped or in the off position.	Reset the circuit breaker or press it to the on position.
	Filter motor thermal overload is tripped.	Push the red reset button on the end of the filter pump motor.
	Filter power cord is unplugged or loose.	Check the power cord at the rear of the fryer entrance box, and at the rear of the pump box and verify that the power cords are pushed all the way into their receptacles.
	Loose or defective sensor switch.	Contact Authorized Service Company.
Oil/shortening is returning to the tank slowly or not at all.	Dirty filter envelope	Change filter envelope.
	Pickup tube screen clogged.	Remove and clean pickup tube screen cap.
	Filter pan not pushed in completely.	Push filter pan in.
	O-rings not sealing on pickup tube.	Check and replace o-rings as needed.
Excessive air bubbles are in the oil being returned to the tank.	Pickup tube screen not tight.	Tighten pickup tube screen cap.
	Pickup tube screen cap missing	Locate and install pickup tube screen cap.
	Filter pan not pushed in completely	Push filter pan in to complete connection.
Oil/Shortening is cloudy when returned to fry tank.	Filter envelope torn or damaged.	Change filter envelope.
	Low shortening temperature	Cloudiness should disappear when oil/shortening is heated.
Drain valve is closed, but the computer controller still displays "DRAINING"	Blue drain valve handle not completely closed	Verify that drain valve handle is completely closed.
	Improperly adjusted or defective drain switch.	Contact Authorized Service Company.

### 14.3 COMPUTER & DIGITAL CONTROLLER DISPLAYS

If your appliance is equipped with a computer or digital controller it may display the following messages on its display.

Display	Problems	Action
<b>OFF</b>	Controller is OFF	Press [I/O] key to turn controller ON
<b>MELTING</b> <b>LIQUID</b>	Oil/shortening temperature is low. Fryer is slowly heating.	Wait for appliance to heat up.
<b>MELTING</b> <b>SOLID</b>	Oil/shortening temperature is low. Fryer is slowly heating.	Wait for appliance to heat up.
<b>HEATING</b>	Oil/shortening temperature is low. Fryer is heating.	Wait for appliance to heat up.
<b>READY</b>	Oil/shortening is at temperature and ready to cook.	Perform cooking activities as needed.
<b>DRAINING</b> <b>TURN OFF</b>	Drain valve is open while controller is on.	Turn off appliance. Close drain valve before turning appliance back on.
<b>HEAT</b> <b>FAILURE</b>	Ignition system has locked out.	Refer to Fryer Troubleshooting section
<b>PROBE OP</b> <b>OPEN</b>	Incorrect probe reading.	Contact a qualified service technician.
<b>HIGH TMP</b>	Oil/shortening has reached an unsafe temperature.	Turn off appliance. Allow time for appliance to cool before turning on.
	Incorrect probe reading.	Contact a qualified service technician.
<b>SYSTEM</b> <b>FAILURE</b>	Temperature probe is shorted.	Contact a qualified service technician.
<b>POLISH</b> <b>NOW</b>	This message indicates that oil in the vat is in need of polishing.	Operators may (depending on settings) polish now, or defer the polish filter operation for a later time.

### 14.4 PROBLEM-SOLVING SHORTENING

<b>Frying oil - Problem-Solving</b>		
<b>Problem</b>	<b>Possible Cause</b>	<b>Solution</b>
Fried Product greasy:	Old or broken down frying oil.	Change frying oil.
	Frying oil temperature not at 350°F when product was fried.	Be sure frying oil temperature is at 350°F when product is fried.
	Fried product not drained after frying.	Drain product properly after frying.
Product too dark or burnt taste:	Old or broken down frying oil.	Change frying oil.
	Breaded product not at frozen temperature when fried.	Fry product immediately out of freezer.
	Cook time too long.	Verify correct product button was pressed.  Verify cook time setting for product is correct.
	Frying oil temperature is too hot, above 350° F.	Use a temperature probe to measure frying oil temperature. Temperature should be 350° F., +/- 5°F.  If temperature is above 350° F., contact a qualified service technician.
	Temperature probe is damaged.	Use a thermometer to measure frying oil temperature. Temperature should be 350° F., +/- 5° F.  Contact a qualified service technician.
Product is too light or product not fully cooked:	Cook time too short.	Verify correct product button was pressed.  Verify cook time setting for product is correct.
	Removed product before cook time complete.	Wait for fryer to beep to signal completed cook time.
	Temperature probe is damaged.	Use a thermometer to measure frying oil temperature. Temperature should be 350° F. +/- 5° F.
	Frying oil temperature is not hot enough – below 350° F.	If temperature is below 350° F., contact a qualified service technician.



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Website Address: [www.pitco.com](http://www.pitco.com)

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